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FOURTH

ANNUAL REPORT

OF

THE DIRECTORS

OF THE

PENNSYLVANIA RAILROAD CO.

TO

THE STOCKHOLDERS.

DECEMBER 31, 1850.

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PHILADELPHIA:  
L. R. BAILEY, PRINTER, 26 N. FIFTH STREET.  
1851.



# DIRECTORS, 1851-1852.

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BY THE STOCKHOLDERS.

WILLIAM C. PATTERSON,  
SAMUEL V. MERRICK,  
DAVID S. BROWN,  
GEORGE W. CARPENTER,  
CHRISTIAN E. SPANGLER,  
THOMAS T. LEA,  
WASHINGTON BUTCHER,  
JOHN YARROW.

BY THE CITY OF PHILADELPHIA.

GEORGE HOWELL,  
EDWARD M. DAVIS,  
ALEXANDER J. DERBYSHIRE.

BY THE COMMISSIONERS OF ALLEGHENY COUNTY.

WILLIAM WILKINS,  
JOHN H. SHOENBERGER.

*PRESIDENT.*

WILLIAM C. PATTERSON.

*TREASURER.*

GEORGE VAUX BACON.

*SECRETARY.*

THOMAS T. FIRTH.

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## ANNUAL MEETING.

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*The Annual Meeting of the Stockholders of the Pennsylvania Rail Road Company, in accordance with the provisions of the Charter, was held on Monday, February 3d, 1851, at 10 o'clock, A. M., at the Sansom Street Hall.*

*W. C. Patterson Esq., President, called the meeting to order and nominated the Hon. Charles Gilpin, Mayor of the City, as Chairman, which was unanimously agreed to, and on motion of George Boldin Esq., P. C. Ellmaker was appointed Secretary.*

*W. C. Patterson Esq., President, submitted and read the Annual Report of the Board of Directors.*

*The Report of the Chief Engineer, General Superintendent, and Treasurer, were also submitted, and the first named document read by the Secretary, when,*

*On motion of Thomas Robins Esq., the several Reports were referred to the Board of Directors for publication.*

*And then the meeting adjourned.*

CHARLES GILPIN,  
Chairman.

P. C. ELLMAKER, Secretary.



# FOURTH ANNUAL REPORT,

&c. &c.

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## Office of the Pennsylvania R. R. Co.

*Philadelphia, February 1, 1851.*

THE Board of Directors submit to the Stockholders, in compliance with the provisions of the Charter, a Statement of the affairs of the Pennsylvania Rail Road Company, from October 31, 1849, to December 31, 1850, the date now fixed by law for the termination of its fiscal year.

The report of the Treasurer shows the receipts

of the Company, on account of capital stock

to the latter date, to have been        -        -        \$ 5,822,210 00

And the disbursements        -        -        -        5,095,546 12

Leaving a balance of        -        -        -        \$ 726,663 88

Which, with the amount of subscription yet

to be collected,        -        -        -        -        1,013,640 00

Constitutes the available means of the Com-

pany for the prosecution of the work,        -        \$ 1,740,303 88

The Board invite the attention of the stockholders to the fact, that the amount of interest chargeable to construction account, being the balance of the interest account from the date of the organization of the Company to the 31st of December last, after deducting interest received and the net earnings of the road, is but \$211,123 29.

The Reports of the Chief Engineer, J. EDGAR THOMSON Esq. and of the late Superintendent of Transportation, HERMAN HAUPT Esq., now General Superintendent, exhibit in detail the operations of the departments with the management of which these gentlemen are respectively charged, and various other matters of more or less interest to the stockholders.

The Eastern Division of the Road has been completed to the Tyrone Forges in a manner entirely satisfactory to the Board, and will not, in their estimation, suffer by contrast with any other rail road in the country. Between that point and Altoona, where the work upon the light sections was delayed some four months for want of means, its condition is by no means satisfactory, and measures will be taken in the course of the ensuing season to have this portion of the work and the Hollidaysburg branch brought up to the high standard, which a proper regard for public opinion and the interest of the stockholders has prescribed.

Upon the Western Division the work thus far has been well done, and has been executed as rapidly, except upon a few sections, as was deemed consistent with durability. The unhappy feuds among the laborers, resulting, in some cases, in loss of life, have been a source of delay and inconvenience, but it is believed that a recurrence of these discreditable scenes will be prevented by the admirable police arrangements made, under the sanction of the Board, by EDWARD MILLER Esq., the associate engineer in charge of that division. If, however, this expectation should not be realized, a firm local judiciary and a reliable military force are ready to assert the supremacy of the law promptly and effectively.

The Board have contracted, upon favorable terms, for a



sufficient quantity of iron for the superstructure of the Western Division. While an honest State pride is gratified in adverting to the fact that the road is thus far constructed exclusively of Pennsylvania material, the Board have no hesitation in expressing their full conviction that the difference in price will be more than counterbalanced by the superiority of our rails over the best of those recently imported for other roads. The contractors, as an evidence of their own confidence, bind themselves to replace, without charge, all rails which shall give way within five years from an original defect.

The Eastern Division of the road was opened for use to the Portage intersection, one mile west of Hollidaysburg, on the 17th of September last, too late to secure to the Company the full benefit of the fall trade and travel, and the Portage Rail Road was closed for repairs, by order of the Canal Commissioners, on the 7th of December. During the months of October, November and December, the net receipts for passengers and freight were \$42,084 84; equal to an annual interest of \$3 82-100 per cent. upon the cost of this division, including the Hollidaysburg branch, with the interest thereon chargeable to construction, and of all the cars, locomotives, machinery and fixtures in use. This result induces the Board to believe that the road will, during the current year, earn six per cent. upon the cost of whatever portion of it may be brought into operation, and that it will henceforward yield an equal or larger per centage upon the whole outlay, productive and unproductive, after making proper provision for depreciation, by the creation of an ample contingent and renewal fund.

The local trade and travel increase so steadily as to leave little room for doubt that they will, in a few years, be

adequate to the support of the road and the payment of the interest upon its cost. Even now the receipts at stations which had no name when the road was located, exceed those at some of the largest towns upon the Juniata. A branch road is in course of construction to Blairsville, with means provided for that purpose by the citizens of that borough, and its extension by local effort to the town of Indiana, or the substitution of a plank road, will depend upon the results of surveys now in progress. The plank roads from Bedford to Hollidaysburg and from Somerset to Johnstown, with numberless kindred improvements under construction or in contemplation, will aid in swelling the receipts of the mother work, to which they owe their existence, and in developing the dormant wealth of Pennsylvania.

All other things being equal, the geographical position of Philadelphia will secure to her a virtual monopoly of the trade of the West against all rivalship. That trade is, however, too tempting a prize to be permitted to remain in any hands but those which are as prompt to defend as they are able to hold it. We must look the fact in the face that it is lost, in part at least, to Philadelphia, if further delay be suffered in the construction of the Mountain Division of the Pennsylvania Rail Road. The Baltimore and Ohio Rail Road is now under contract throughout its entire length. From Cumberland westward 5,000 men are at work upon it; 22,000 tons of rails have been imported for it, and the energy and sagacity which mark its management, permit no doubt that it will be prosecuted with the utmost vigor till it reaches the Ohio River. The Erie Rail Road, hitherto driven forward with very little regard to cost, must be completed to Lake Erie in May next, in compliance with the condition upon which \$3,000,000 of

State and \$750,000 of private stock were relinquished to the present stockholders.

To compete with these unbroken lines from the seaboard to the western waters, managed, as they will be, by the ablest merchants of her sister cities, Philadelphia will have the Eastern and Western divisions of the Pennsylvania Rail Road connected by a link of 36 miles, embracing ten inclined planes, the crossing of which has heretofore generally consumed sufficient time to make the trip between Philadelphia and Pittsburg upon a first class rail road, and the use of which will entirely cut off from this Company one of its largest prospective sources of revenue, the transportation of live stock from points west of the Alleghenies to the eastern grazing counties of Pennsylvania, and to the Philadelphia and New York markets.

It is suggested by the Chief Engineer, that the sum of \$1,500,000 will suffice to build a road from Altoona to the head of plane No. 2, by which the worst portions of the Allegheny Portage Road would be avoided, and the time consumed in crossing the mountains materially reduced. As a last alternative, this proposition might be adopted; but while the proposed connection would be, in many points of view, a decided improvement over the one now in use, it would fall very far short of accomplishing the primary purpose for which this undertaking was projected, of securing to the Commonwealth and its two great cities the benefits accruing from the possession of the trade and travel of the West, by furnishing a route which should in all respects compare favorably with the best of its rivals. That object can never be attained while any link, however small, shall remain under the ever-varying management incident to the incessant changes of State and local politics.

With a view to procure that result at the earliest possible day, and to promote, at the same time, what they conceive to be the true interests of the present stockholders, the Board earnestly recommend that immediate provision be made for putting the Mountain Division under contract at as early a period of the ensuing spring as the character of the ground will permit. To build this portion of the road, and partially equip the whole, will require the filling up of the capital stock of the Company to the limit fixed by the recent action of the stockholders, under the authority conferred in the Charter. The amount subscribed to this date is \$6,835,850, which will be increased more than \$100,000 by the issue of stock, deliverable upon the completion of a portion of the contracts upon the Western Division, leaving to be supplied a sum slightly exceeding Three Millions of Dollars.

In asking at this time for this large additional subscription, the Board are aware that they are drawing freely upon resources already heavily taxed; but they do not, on that account, hesitate to make the appeal. They make it in the confident belief that the sum they ask will, through the instrumentality of this road, be returned ten-fold to Philadelphia and her citizens before the present generation shall have passed away, and that their demand will elicit a response worthy alike of the source from which it is to emanate, and of the object to which it is to be applied.

If we could forget what is due to ourselves, we are not at liberty to overlook our obligations to others who have united their fortunes with ours in a common destiny, and faithfully fulfilled their part of the implied contract. The extraordinary energy with which the Ohio and Pennsylvania Rail Road has been driven westward has concentrated upon that improvement many smaller ones, originally projected with a view to

very different connections, and created others destined to add largely to its revenues, and to those of the Pennsylvania Rail Road. From the present year forward that road and its countless tributaries will pour upon the western terminus of ours an immense amount of tonnage, to find its way slowly, and at a comparatively heavy cost, over a broken line, till the completion of our entire road shall open an outlet for this and other roads whose most available eastern connection is still an open question, whose capacity shall be equal to any demands which can be made upon it.

The Board have made the best arrangements in their power for the transportation of merchandise and produce between Philadelphia and Pittsburg, during the continuance of canal navigation for the current year, at prices varying from 50 cents to \$1 per hundred pounds. They have fixed these rates, not so much with a view to present profit as to the promotion of what they believe to be the true interests of this Company, and of the mercantile community, with which it is so intimately identified. They have, after the most careful investigation and mature consideration, decided upon starting from the outset with a uniform tariff of low charges, in preference to the sliding scale, which has heretofore militated so seriously against the increase of the inland trade of Philadelphia and of the revenues of the Commonwealth.

The Board are gratified to have it in their power to state that they are sustained in the adoption of this system by the concurrence of the intelligent gentlemen who now compose the Canal Board, and that they are assured of their cordial co-operation in fixing it as the settled policy which shall hereafter govern the operations upon the State works as well as those of this Company.

They bring their action upon this subject to the notice of their constituents, in full confidence that it will meet their hearty approbation.

BY ORDER OF THE BOARD.

W. C. PATTERSON,  
*President.*

# The Treasurer Reports

AMOUNT RECEIVED FROM STOCKHOLDERS IN PAYMENT OF

		Dolls.	C.
Instalments, . . . . .		5,822,210	00
<b>AMOUNT EXPENDED.</b>		Dolls.	C.
<b>EASTERN DIVISION.</b>			
Graduation and Masonry, 1,841,326		00	
Superstructure, Ballast,			
Bridges, Iron Rails, Sills,			
Ties, &c., . . . . .		1,598,485	87
Engineer Department, . .		151,085	96
Land Damages, Fencing,			
Real Estate and Right of			
Way, . . . . .		167,062	03
Station Houses, Water Sta-			
tions, &c., . . . . .		49,723	92
		3,807,683	78
<b>WESTERN DIVISION.</b>			
Graduation and Masonry, .		520,087	55
Ballast, Ties, &c., . . .		9,480	68
Engineer Department, . .		76,493	37
Land Damages, Fencing,			
Real Estate, Right of			
Way, . . . . .		52,973	63
		659,035	23
Organization and Expenses, . . .		60,881	34
Interest, chargeable to cost			
of eonstruction, being bal-			
ance of Interest Account, 384,331		51	
Less, earnings of Road, .		173,208	22
		211,123	29
Locomotives and Cars, . . . . .		339,736	97
Machine Shops, Foremen's Houses, Car			
Sheds, &c., . . . . .		33,990	51
Balance in hands of Agents, 31,395		25	
" " Treasurer, 678,363		63	
		709,758	88
		5,822,210	00

E. E. Philadelphia, January 1, 1851.

GEORGE V. BACON, *Treasurer.*





THIRD  
ANNUAL REPORT  
OF  
THE CHIEF ENGINEER.

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Engineer's Department Penn'a R. R. Co.

*Philadelphia, January 1, 1851.*

To the President and Directors of the  
Pennsylvania Rail Road Company.

GENTLEMEN :

I have the honor to report, that since my last annual communication, your Road has been extended from Lewistown to the Portage Rail Road, a distance of seventy-eight miles.

The connection with that improvement was made in September, at which time there was a continuous Rail Road in use from Philadelphia to Johnstown, 279 miles in length.

For the purpose of adapting that portion of this line, owned by the Commonwealth—crossing the Alleghenies—to winter use, the Canal Commissioners suspended operations upon it on the 7th of December, until the opening of navigation in the spring; by which time it is hoped that such repairs and renewals will be made, as will secure the route from further interruptions. The importance of effecting this object, so as to have secured this winter's business to that improvement, was earnestly but unsuccessfully urged upon the Legislature of 1849, by the Boards of Trade of Philadelphia and Pittsburg, and the then Superintendent of the Road; and in consequence of the failure of their application, a suspension of our

freighting business, and a decrease in the passenger travel, has taken place, materially affecting the revenues of the Commonwealth, and the receipts of this Company. An earlier connection with the Portage Rail Road, was originally anticipated, but owing to the withdrawal of the work from contract, above Tyrone, until the capital of the Company could be increased to the amount necessary to pay for it—in conformity with the policy adopted by the Board—this could not be accomplished. Operations upon this portion of the line, were not resumed until late in the autumn of 1849, after which time it required every possible exertion, at an increased cost, to secure the completion of the work in time to give a practical test of the facilities afforded by the Portage Rail Road, before its close, for transacting our business over it. To accomplish this we had to resort to a considerable amount of temporary bridging, that must be superseded by more permanent structures this year.

The object to be secured, seemed to justify the expense and risks incurred, and the probable consequences arising from any temporary inconvenience and irregularities, that might follow a premature opening of the road. We have not been disappointed in the advantages obtained, but the annoyances we have been subjected to, by bad connections with the State rail roads, unavoidable under the circumstances; as well as from our own incomplete arrangements, were greater than we expected, causing complaints from those not familiar with the circumstances, or who could not appreciate the importance of the results anticipated, from the policy adopted.

The cost of the graduation and superstruction of the Eastern Division, though increased from fifty to sixty thousand dollars, by the hurried execution of the work above Tyrone,

during an unfavorable winter and spring for carting, has fallen within the estimates heretofore submitted. There is, however, a considerable amount of work yet to do—passed over for the reasons already mentioned—which will fully consume the remainder of the original estimate. We have still a large unexpended balance on superstructure account, which will, it is thought, prove something larger than necessary to meet the demands for the completion of that part of the work omitted, in consequence of the freshness of the embankments, and the necessity of getting the whole work into early use. These consist of ballast on embankments, ditching and draining track, cattle-guards at road crossings, water pipes, tanks and wood sheds at water stations, all of which are charged under this head.

The amount estimated for Land damages and Real Estate, has proved insufficient; the Juries in most cases having exceeded our views of a just liberality, in their awards in favor of the property holders.

The following statement will exhibit the payments on account of this division, up to the 1st of January, as taken from the books of the Treasurer, with the present and previous estimate of the ultimate cost of the road.

	<i>Former Estimate.</i>	<i>Amount Paid.</i>	<i>Present Estimate.</i>
Graduation, - -	\$ 2,115,000	\$ 2,068,179 35	\$ 2,175,000
Superstructure, -	1,535,000	1,400,357 86	1,485,000
Engineering, &c.,	145,000	134,799 03	145,000
Cost of Road,	<u>\$ 3,795,000</u>	<u>\$ 3,603,336 24</u>	<u>\$ 3,805,000</u>
Land damages and			
Real Estate, -	130,000	167,062 03	215,000
Total, - -	<u>\$ 3,925,000</u>	<u>\$ 3,770,398 27</u>	<u>\$ 4,020,000</u>

The Interest Account of this division has been blended with that of the Western, and will be shown hereafter in the aggregate cost of the whole road. But upon balancing the several debits and credits to this account, and making allowances for the disbursements upon the west side of the mountain, I find that the amount estimated (\$255,000) has proved sufficient to meet the demands upon it; the small estimated increase in the cost of the division, being almost wholly in the item of land damages.

The amount expended for out-fit, including shops, warehouses, cars, locomotives and other machinery, up to the 1st inst., has been \$416,938 15, which is considerably less than estimated. This difference is partly caused by our inability to complete the machine shops at Altoona, as expected, owing to the inferiority of the brick first delivered.

#### MOUNTAIN DIVISION.

That portion of the road crossing the Allegheny Mountains, in consequence of the means of the Company being insufficient to justify its immediate execution, has been considered in our estimates as a separate division, though the summit of the mountain or the water shed parting the Eastern and Western waters at Laurel Swamp, seems to be the natural landmark between the two grand divisions of the work. The estimates, however, will be continued as heretofore, but limiting the Mountain Division to the work not under contract, which will include the space from Altoona to the Stone Viaduct over the Conemaugh, on the Portage Rail Road— $7\frac{8}{10}$  miles east of Johnstown—a distance of  $31\frac{1}{2}$  miles.

During the past fall, a resurvey was made of that portion of the road ascending the eastern slope of the mountain,

under the immediate direction of Mr. R. W. CLARK as P. A. Engineer, with his accustomed accuracy, which demonstrates that the points of greatest difficulty upon the previous line—at Burgoon's and Kittanning Ruus—can be materially cheapened, and the line at other points much improved. But the lateness of the season prevented an actual location of the route thought to be the best, and I have assumed from the line traced that a saving of \$150,000 can be safely calculated upon the original estimate, and the distance shortened three-fourths of a mile. The elevation of the tunnel at Sugar Run Summit, on the new route, will be reduced from ten to fifteen feet, and its length increased to 3750 feet; leaving the whole ascent to be overcome, from Altoona—the western terminus of the light gradients—984 feet. The length of line to overcome this elevation is  $12\frac{1}{4}$  miles.

No further surveys have been made of the Mountain Division, west of Sugar Run Summit, since my last report, but it is thought that some improvements can be made in the details of the location, to reduce its curvature.

The heaviest portions of this division lay at Sugar Run Gap, and on the eastern slope of the mountain. The tunnel will prove the most tedious job, and for the purpose of facilitating the completion of the grading, two shafts to work it from have been commenced, together with a sufficient amount of the eastern approach to open the face of the tunnel for working the drift. The entrance at the western approach is not difficult, and if the means are obtained early in the spring for completing the division, this work can be ready for six gangs of miners by June, and the whole prepared for the rails in two years—as soon as the remainder of the grading east of the tunnel can be completed, if placed under contract at the same time. The heavy portions of the work on the eastern slope of the mountain, will consist of

embankments across Mill Creek, Kittanning and Burgoon's Runs, and two small tributaries of Sugar Run. Except at the eastern approach to the tunnel, there are no excavations that can cause delay in the execution of the work. Beyond Laurel Swamp Summit, there are not many points that will require a long period to grade. A tunnel through Pringle's Point, 600 feet in length, and some crossings of the Cone-maugh and its tributaries, are the most important.

It may also be observed, that should the Board fail to raise all the funds necessary to complete the Mountain Division, that for a sum not exceeding one and a half millions, a continuous road may be made from Altoona to the head of plane 2, avoiding all the objectionable features of the Portage Rail Road—except this plane—and save about six miles upon the present route traveled by our cars via Duncansville. After passing plane 2, the line essentially differs from the route of the Portage, though a connection could be made with that work in the vicinity of Jefferson, avoiding all the planes; but it would be at the sacrifice of obtaining the best line for our road.

The present estimate of the cost of the Mountain Division, from Altoona to the Stone Viaduct, is—

Graduation, &c., from Altoona to Laurel Swamp

Summit,  $15\frac{1}{4}$  miles, - - - - - \$ 1,065,000

Graduation, &c., from Laurel Swamp Summit to

Stone Viaduct,  $16\frac{1}{4}$  miles, - - - - - 430,000

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\$ 1,495,000

Engineering, - - - - - \$ 45,000

Land damages, &c., - - - - - 35,000

Superstructure, - - - - - 350,000

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430,000

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\$ 1,925,000



The importance of placing the work embraced within the above estimate, under contract at an early period this year, cannot be too strongly urged upon the Company. At the commencement of this enterprise, there was but little prospect of the immediate continuation of the Baltimore and Ohio Rail Road beyond Cumberland, or the New York and Erie Rail Road west of Elmira. If this condition of things had remained, there would have been no difficulty in maintaining a successful competition with either of these works, by the use of the Portage Rail Road as a part of the line between Philadelphia and Pittsburg. But the progress of these improvements has not been as tardy as anticipated. The Baltimore and Ohio Rail Road will be extended to the Ohio River in 1852, and the New York and Erie Rail Road Company is under a forfeiture to the State, amounting to some \$3,000,000, if it should fail to complete its entire road in May next.

Under these circumstances, our route, subject to the delays and interruptions that must be caused by the use of the Portage Road, could maintain but a sickly competition for the travel and trade of the West with these improvements—each managed by one mind and one interest throughout their entire length, from the Eastern to the Western waters. With these facts before us, it is evident that the very heavy expenditures that we have incurred, on both sides of the mountain, will have failed to secure the great object sought by the construction of the road—producing only a work, useful and profitable it is true, as a local improvement, but devoid of that influence upon the trade of the City and the West, which its position and characteristics entitle it to command, and to promote which the work was mainly undertaken. No period could be more propitious than the present, for raising the means necessary for the immediate

prosecution of the work, and it should not be suffered to pass unimproved.

That an investment in the stock of this Company will prove profitable, I believe no one at this time doubts. If there are any such, a glance at the accompanying map and profile of our route, and its connections, must convince the most skeptical, that the region tributary to the road is *more* than sufficient to yield a business for its profitable employment—controlling as it will, a local trade and travel, which the unbroken mountain barriers that stretch on the south from the Juniata to the Potomac, and on the north to the Susquehanna, secures to us, without a rival in our vicinity; together with a through business which the shorter distance by our route between all the West, south of the Lakes, and the great commercial marts of the East, its more favorable gradients, and the comparatively small cost of the road, must enable us to command.

The distance from New York, by the New York and Erie and Lake Shore Rail Roads to Cleveland, is 633 miles, while by the Pennsylvania Rail Road, Pennsylvania and Ohio Road, and Cleveland and Pittsburg Rail Road, the distance between the same cities is but 583 miles, showing a difference in favor of our route of 50 miles to their own city, and 146 miles in favor of Philadelphia.

But for all of the country upon the line of the Pennsylvania and Ohio Rail Road, or south of it, the difference in favor of Philadelphia is increased to about 200 miles.

Even for the trade of Baltimore itself, our line possesses advantages in gradients more than sufficient to counterbalance the few miles in favor of her route, by the Central Ohio Road to the interior of that State, a saving of actual distance, if any, which a direct road from ours to Wheeling, would destroy.



There being no conveyance at present through Pennsylvania, that can compete in time and comfort with the rail road and steamboat lines from Cincinnati, by the Lakes, to New York and Boston, the whole tide of travel between the East and West, which far exceeds in amount the calculations of those who have not witnessed it, now flows in that direction. But when our road is finished, and the Pennsylvania and Ohio Rail Road is extended to the Cleveland and Columbus Rail Road, which it will be ere we reach Pittsburg, the advantages in our favor above mentioned (if the Mountain Division is completed) must turn the tide of travel back upon us, with increasing numbers, from the reduced fare and decreased time (24 hours from Philadelphia to Cincinnati), which these will enable us to offer, giving abundant sources of revenue from passengers alone, to satisfy the most exacting capitalist.

When the Mountain Division is finished, there will be a continuous single track rail road from Philadelphia to Pittsburg, free from inclined planes, with no gradient against the heavy trade, west of the Allegheny Mountains, exceeding  $52\frac{8}{10}$  per mile on straight lines, and 40 feet on curves of minimum radii, or east of it, on that portion belonging to this Company, exceeding  $10\frac{1}{2}$  feet per mile.

Double this line, and with the advantages it possesses in distance, gradients and freedom from interruptions from changes of season, you will be able to compete successfully, *in economy of transportation*, with the Erie Canal, for the heavy trade of the West, and to exceed it greatly in dispatch—drawing to this City flour and other heavy commodities, which, by the aid of steamships, can be delivered if desirable, in the markets of Europe, many days in advance of the route by the Lakes and Canals of New York.

Upon a single track rail road, there can be but a limited

amount of business done with regularity and safety; and as the cost of transportation on rail roads, as in nearly every other business—but probably to a greater extent on rail roads—decreases with its amount, it follows that the minimum cost of carriage cannot be reached until the means for the transportation of the maximum quantity is offered. But as this object is attainable, throughout the whole road, for a sum not exceeding three and a half millions, there can be no difficulty in raising the amount desired—after the completion of the single line—for proceeding with the additional track as fast as the increasing business of the road will require it.

#### WESTERN DIVISION.

As suggested in my last annual report, the details of the location of this division have been materially altered, and improved, to conform to the rules established for the location of this road.

Under these general rules, each mile of distance saved—in comparing lines—has been valued at \$53,000, and each degree of curvature at \$50—other circumstances being equal. The maximum gradient has also been increased on straight lines to  $52\frac{8}{10}$  feet per mile—a rise of one foot in a hundred—and decreased on curves at the rate of  $\frac{25}{1000}$  of a foot per degree per 100 feet.

The application of these rules has effected greater improvements in the route than expected, either by Mr. MILLER or myself, and reflect the highest credit on the skill and judgment of the Principal Assistants, Messrs. G. W. LEUFFER and O. H. BARNES, under whose immediate direction the relocation has been made.

The total distance saved between Johnstown and Pittsburg, is  $3\frac{1}{2}$  miles, and the reduction of curvature  $2781^\circ$ —from

7912° on the original location to 5131°.—These savings, according to the above estimate of their value, is equal to \$ 308,650; or, in other words, the estimated decrease in the annual cost of transportation upon the new location, is equal to \$ 18,500 per annum over the original line.

The line has also been freed from all the tunnels upon it, except two; one under the main street of Greensburg, 200 feet in length, and the other at Barclay's Summit, of 400 feet, one and a half miles further west. Its comparative freedom from perishable structures is also remarkable, there being but two bridges upon the division, one of 104 feet span over the Canal at Johnstown, and another of 100 feet across Turtle Creek;—the bridge across the Conemaugh being constructed of iron, and that at the Loyalhanna of stone. At the Sewickly a solid embankment is to be raised, instead of the wooden bridge proposed.

The whole division from Pittsburg to the Big Viaduct, a distance of  $85\frac{1}{4}$  miles, is now under contract. That portion of the grading between Johnstown and the west side of Chestnut Ridge was let in November, 1849. It is in a satisfactory state of forwardness, and will be ready for the rails in April as far down as Bolivar. In the gap of Chestnut Ridge, there is an embankment near the Pack-saddle Rocks, of 109 feet in height, which will not be finished until sometime in the ensuing summer.

As soon as it was ascertained that the subscriptions to the stock of the Company justified extending the contracts for grading, the remainder of the heavy work on this division was advertised and let in May last, together with those portions of the 15 miles adjacent to Pittsburg that had not been previously contracted for; and in the fall the lighter sections were let, completing contracts for the whole division, including a branch to Blairsville  $2\frac{3}{4}$  miles in length.

The progress of the work has not been as great as anticipated, owing to the frequent conflicts between the different factions of laborers upon the road, which have caused much loss of time during the most favorable portion of the year for out-door operations.

It is believed, however, that we shall have no difficulty in completing the work east of the Loyalhanna, or to the Monastery grounds,\* by the close of navigation of this year, where a junction can be made with the Southern turnpike, and the staging reduced to 27 miles. The very heavy grading between the mouth of Brush Creek and the Monastery, will delay the completion of that part of the work until some time in 1852. Should labor be abundant, it may be finished by midsummer of that year; but at present it is scarce, and there seems to be no feasible means by which it can be advantageously increased.

The heaviest sections, and those which will cause most delay, are 18, 33, 36 and 37, amounting to \$140,000, \$90,000, \$110,000 and \$112,000 respectively. The first (section 18) is in the hands of M'Gran & Barry, of Lancaster; the second (33) is being executed by Michael Malone, of same place; the third (36) by Snodgrass & Haymaker, of Westmoreland, and the last (37) by Joseph Car, of Delaware—all old contractors, of acknowledged character for energy and good management.

The estimate of the cost of the division is somewhat greater than anticipated, owing to the large reductions made in its length and curvature, together with the substitution of imperishable structures for those of wood originally contemplated, as well as the occurrence of less loose, and more solid, rock in the excavations, than at first calculated upon.

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\* This place is 39 miles east of Pittsburg, and deducting 12 miles of rail road to be laid adjacent to Pittsburg, leaves the 27 miles of staging.

## ESTIMATE.

Between Big Viaduct and Blairsville Branch,	-	\$ 486,000
“ Blairsville and Loyalhanna,	- -	230,000
“ Loyalhanna and Greensburg,	- -	505,000
“ Greensburg and Brush Creek,	- -	595,000
“ Brush Creek and Pittsburg,	- -	174,000
Total, 85 $\frac{1}{4}$ miles,		<u>\$ 1,990,000</u>
Superstructure on this distance,	- - -	875,000
Total cost of construction,		<u>\$ 2,865,000</u>
To which add for Engineering,	\$ 115,000	
Real Estate and Damages,	- - 95,000	
		<u>210,000</u>
Total cost of Western Division, exclusive of		
Interest,	- - - - -	\$ 3,075,000
To which add estimated cost of Grading		
and Bridging of Branch to Blairsville,		
2 $\frac{3}{4}$ miles,	- - - - -	\$ 28,000
Superstructure,	- - - - -	22,000
		<u>50,000</u>
Total,		<u>\$ 3,125,000</u>

The whole expenditure on the Western Division to this date is \$ 659,998 20.

## SUMMARY

OF THE COST OF THE WHOLE ROAD, INCLUDING BRANCHES  
TO HOLLIDAYSBURG AND BLAIRSVILLE.

Eastern Division,	130 miles,	- - -	\$ 3,910,000
Mountain Division,	31 $\frac{1}{2}$ “	- - -	1,925,000
Western Division,	85 $\frac{1}{4}$ “	- - -	<u>3,075,000</u>
Main Line,	246 $\frac{3}{4}$ “	- - -	\$ 8,910,000

Main Line, (bro't over), 246 $\frac{3}{4}$ miles, - -	\$8,910,000
Hollidaysburg Branch, 6 $\frac{3}{4}$ " - - -	110,000
Blairsville Branch, 2 $\frac{3}{4}$ " - - -	50,000
<hr/>	<hr/>
Total, 256 $\frac{1}{4}$ " - - -	\$9,070,000
Interest Account, - - - - -	610,000
<hr/>	<hr/>
Total cost of Road and Branches, including	
Interest, - - - - -	\$9,680,000
<hr/>	<hr/>

Which exceeds but little the cost of the Baltimore and Ohio Rail Road, between Baltimore and Cumberland—only 179 miles in length—and but about four-tenths of the estimated cost of the New York and Erie Rail Road, 464 miles long.

The estimated cost of the outfit necessary, as soon as the road is finished to Pittsburg, is \$1,400,000, which, added to the cost of the road, will make the whole amount required for the work, \$11,080,000.

#### OF THE PROSPECTS AND BUSINESS OF THE ROAD.

The history of all well located rail roads shows a progressive increase of business—from the period that they are opened for use—the net profits increasing in a greater ratio than the receipts.

The general causes which produce these favorable results are sufficiently obvious. Rail roads, to a great extent, create the very business upon which they thrive—"the advantages and conveniences which they afford, collect and increase the population in their vicinity," developing the productive resources of the country within the range of their influence, calling into existence new sources of employment and wealth which, but for the quick and cheap medium of conveyance they afford to market, would remain dormant. These produc-



tions are exchanged at distant points for other commodities, thus building up a new business to the region traversed, causing the movement of parties interested, thereby alike augmenting the travel and freights of the road.

The general activity from these influences, that is noticeable upon all properly conducted rail roads, is mainly to be attributed to the knowledge and practice by their managers, of the laws which develop sources of revenue, and give animation to the business of the improvements committed to their charge.

Although the line of the Pennsylvania Rail Road is not free from the evidences of its beneficial influence upon the country traversed, yet, in consequence of the violation of the laws of trade, in framing the toll sheet of the Philadelphia and Columbia Rail Road, it has been impossible to give to it all the advantages which such an improvement, under different circumstances, is calculated to spread along its route.

Why the energies and resources of the country traversed by that improvement, and the lines tributary to it, should be muffled by the antiquated notions that have heretofore governed its business, can only be accounted for from the fear that has taken possession of the public mind—to the exclusion of all other considerations—that the heavy responsibilities of the State would not justify any tampering with her sources of revenue. Happily this day is past, and it now seems appropriate to call the attention of the authorities to the modifications desired; which experience demonstrates will not only prove beneficial to the community, but also add, ultimately, to the revenues of the Commonwealth. All extraordinary charges upon the trade of the Pennsylvania Rail Road, made by the State, are but taxes upon its local travel and business. Our through rates—in connection with

the State improvements, or, when the road shall be finished to Pittsburg—will not be controlled by any restrictions imposed upon the Company.

Competition with other routes must necessarily fix the charges upon our road—whether it be for travel or for freight—without reference to any taxes upon its tonnage. Hence the impolicy of a tax, the whole of which must be imposed upon the local business of the road, and borne by the citizens of the Commonwealth, of which this Company is simply made, indirectly, the tax collector.

It would not be a difficult task to satisfy any unprejudiced mind of the injustice of the tax upon the tonnage of the Pennsylvania Rail Road—unless required by the necessities of the treasury of the Commonwealth—in which case it should be made a general law, alike applicable to all rail roads. But as the Legislature has fixed this tax, without reference to the merits of the case, but as the measure of protection desired for the works of the Commonwealth, any discriminations against this Company, by general regulations or otherwise, would be so manifestly unjust, that I cannot believe that the policy will be adhered to by the Canal Commissioners, when they have dispassionately considered the subject.

In my official intercourse with these gentlemen I have studiously avoided making any request for the benefit of this Company, that my judgment did not clearly sanction as that which would either conduce to the interest of both parties, or, at least, not prove injurious to the Commonwealth, and which I would not accede to, if in charge of the State improvements.

In this spirit we have asked a reduction of tolls upon the Columbia Rail Road, which would enable us to turn a portion



of the Juniata trade over our line, and over that work, a business which is now lost to it, in consequence of the excessive charges between Philadelphia and Columbia.

It may not be generally known, that the policy heretofore pursued by the State, has driven nearly the whole Juniata trade, by the Tide-water Canal, or Baltimore and Susquehanna Rail Road, to a market—while a more judicious adjustment of the toll sheet would have insured a large share of it to the whole line of the State improvements, from the point shipped, to its destination.

That it is the interest of the State that our views should be met in the spirit they are advanced, will be evident, when it is shown that the tolls and taxes which will be paid to the Commonwealth on each article passing over the Pennsylvania and Columbia Rail Roads, will greatly exceed that now received upon the canal. Take, for instance, flour—the chief item of transportation, and it will be found that at the present rates, it will pay to the State—say from Lewistown, a point about midway between Columbia and Hollidaysburg—97 cents per 1000 lbs. if carried over our road, while on the canal, it will only pay 38 cents.\*—Other articles will produce like results, varying according to the distance carried on the canal.

I have that confidence in the intelligence of the Canal

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\* If flour should be entered from Pittsburg to Philadelphia, to pass over the Pennsylvania Rail Road, it will pay a tax to the Commonwealth of nearly 30 cents per 1000 pounds, while the toll charged by the State is only 35 cents per 1000—making the amount paid by this Company into the treasury of the Commonwealth on each 1000 pounds, 65 cents, for the use of a portion of the public works—while a transporter using the whole line pays but 35 cents.

Board, and their appreciation of the true interests of the Commonwealth, to believe, that when they have weighed these facts, they will make the reductions necessary to secure the objects in view. In consequence of the continued ill-health of one of the members of the Board, it has been impossible to obtain their action upon this subject at an earlier date.

It is evident from the facts above stated, that as far as relates to the local trade of the Juniata, the interests of the Commonwealth, as a proprietor of public works, and this Company, are in perfect harmony, and that their co-operation must redound to the public advantage. Whether this harmony of interest exists when the through business is considered, was a matter of more difficulty to determine—but under existing circumstances, it would seem that there is no public interest calculated to disturb it.

These circumstances were doubtless weighed by the Legislature that granted the charter for the construction of this road, and influenced their determination. It must have been seen by them that their predecessors had authorized the construction of a line of improvements—at the expense of the Commonwealth—connecting the two great cities of the State, of a mixed character, the best that their wisdom could then devise, which time has demonstrated to be unsuited to a competition with the great lines progressing to completion on the north and on the south of her, which, if not met by an improvement of equal character, must necessarily strip her works of all through business, and her treasury of revenue from them.

It could not have been a question with the statesmen of the Legislature that granted our charter, whether the trade should be kept upon the public works of the State; it must

have been simply a question whether it should be retained within the borders of the Commonwealth.

If the Pennsylvania Rail Road had not been undertaken, the through transportation by the public improvements, would as certainly have yielded to the superior arteries of commerce, constructing immediately without the borders of the State, as the aboriginal occupants of the soil of Pennsylvania have, in a few years, yielded, almost without a struggle, to the superior race that landed on her shores.

Under these circumstances, the construction of the Pennsylvania Rail Road became a fact—necessary to the honor and prosperity of the State—and the work which is now springing into existence under her laws, should be cherished by her citizens as a noble undertaking, destined to elevate her character abroad, and add to the wealth and intelligence of her people; breaking down the prejudices that have hitherto existed between different sections of the State, from ignorance, or misconception of their mutual interests and feelings.

Taking these views of the subject, our road cannot be looked upon as a rival to the improvements of the State for the through business, but as a coadjutor, through whose influence alone, freights will be attracted to the common termini of the respective works, and each, according to its adaptation and ability for transportation, receive its full share.

The following condensed statement will exhibit the receipts and expenses on account of the business of the Pennsylvania Rail Road, from the 1st of September, 1849 (when the road was opened to Lewistown) to the 31st of December, 1850, 16 months :

		<i>Dolls.</i>	<i>C.</i>	<i>Dolls.</i>	<i>C.</i>
RECEIPTS.					
From Local Passengers, September 1st, to December 31st, 1849, - - -		17,719	62		
From Philadelphia and Pittsburg Pas- sengers, do., - - - -		6,987	70		
From Mails, do., - - - -		387	15		
" Freight, do., - - - -		6,001	13		
				31,095	60
" Local Passengers, for 1850, -		96,646	86		
" Philadelphia and Pittsburg Pas- sengers, for 1850, - -		72,734	05		
" Mails, " - -		7,257	26		
" Adams' Express, " - -		1,044	63		
" Freight (including Pittsburg freight, amounting to \$26,531 51),		78,071	74		
				255,754	54
Total receipts from business of Road,				286,850	14
Receipts for hauling freight on Harris- burg and Lancaster Rail Road, -				17,548	79
Receipts for carrying passengers on Harrisburg and Lancaster Rail Road, including Branch Road to Columbia,				35,053	58
Total Receipts, - - - - -				339,452	51
EXPENSES.*					
For Motive Power Penn'a Rail Road and Harrisburg and Lancaster Rail Road (321,000 miles run by engines),		60,147	92		
Maintenance of way Penn'a Rail Road,		31,623	49		
" " Passenger Cars,		3,109	35		
" " Freight Cars, -		1,938	58		
For Conducting <i>Passenger</i> and <i>Freight</i> transportation, including tolls on State Roads, and Harrisburg and Lancaster Rail Road, and expenses over same, also freight and tolls on Western Division of Penn'a Canal,		75,424	94		
				172,244	28
Leaving net profit, - - - - -				167,208	23

\* For details, see Statement marked LL.

The expenses paid for Motive Power, conducting transportation, &c., not directly connected with the operations upon the Pennsylvania Rail Road, were \$ 76,152 35.

Leaving the expenses of the business proper of the Pennsylvania Rail Road, \$ 96,191 93.

For more detailed information on this subject, I refer you to the Report of the Superintendent, and the numerous statements appended to it.

These statements exhibit fully the business and expenses of the road for the period above mentioned; but from the frequent changes in the length of the road, they do not afford data valuable for future comparisons. The road was opened for use to Lewistown, 61 miles, on the 1st of September, 1849; to M'Veytown, 72 miles, December 24th, of the same year; to Shaeffer's Aqueduct, near Mount Union, 85 miles, April 1st, 1850; to Huntingdon, 97 miles, June 10th; and to the Portage, 137 miles, on the 16th of September. A connection with that work, however, was not made until October.

The average length of road in use up to this date has been about 90 miles, and the average capital invested \$ 2,800,000, \$ 300,000 of which has been expended in preparations for the second track, and is for the present dormant.

In addition to the varying length of the road from time to time, during the year, and the general indisposition of shippers to change their channels of transportation at once, there has been that bar to a profitable local freight business upon our road—already referred to—consisting of heavy charges and expenses in passing over the State Rail Roads, which will doubtless be removed or modified; but in consequence of their existence, no conclusions can be drawn as to our future freighting business, from the operations of the road

during the past year. There is evidently immense sources of profitable employment for the work along its whole route, which only require a judicious system of tolls to develop to their fullest extent. I feel no hesitation in saying, however, that even should our road be limited by its connections with the State improvements, in its usefulness to the community as an avenue to market, it cannot fail to yield ample profits to its stockholders from travel and such freights as will pay for the increased speed.

Without some modification in the tolls charged upon the State improvements, a profitable general through freight business is alike unattainable, until our whole line is completed to Pittsburg. The maximum tolls—which we can only avail ourselves of by paying also over that portion of the public improvements not used—benefit us only in the item of flour, where the charge is so low that the farmers of Ohio, actually pay less tolls on their produce (deducting the cost of motive power on the rail roads) from Pittsburg to Philadelphia, than is paid by those residing in parts of Lancaster county, to the same city.

These discriminations against the agricultural interest of the State, when fully understood by the public, it seems to me must operate to reduce the local charges, at least to a standard corresponding with other roads carrying a heavy tonnage.

The local travel of the road has fully equalled my expectations, and it is increasing daily. The accompanying statements, marked R and S, exhibit the whole number of passengers entered at each station, from Dillerville to Hollidaysburg, amounting in the aggregate to 194,833 in sixteen months. In consequence of the frequent changes in the length of the road, before alluded to, and the different prices



charged, it is impossible to reduce the account of passengers with accuracy to an equivalent through travel.

There is included in the above number of passengers, 22,301½ entered to go through between Philadelphia and Pittsburg, and 4674½ between Harrisburg and Pittsburg, making the whole long travel passing over our road, 26,975. The through travel during the months of October and November last might have been considerably enlarged by proper connections with the Portage Rail Road. These were prevented by the illness of members of the Board of Canal Commissioners, at the period it became necessary to make them, leaving no authority through whom other arrangements could be effected. The dissatisfaction caused by this state of things, unjustly fell upon this Company, who were powerless to remedy the evil. The recurrence of similar difficulties have not yet been provided against, and their prevention should claim the early attention of the parties interested in the through travel.\* If it is not obviated by the use of the Portage Rail Road partly at night—which the increasing freighting business would seem to demand—the object may be secured in a less satisfactory manner, by changing the hours of departure of the trains from the city.

Except during a few weeks subsequent to the opening of the road to Hollidaysburg—when regularity under the circumstances would have been considered an exception to the general rule—our trains have run with as much precision as those of the oldest roads in the country, reflecting the highest credit upon the management of the Superintendent in immediate charge of the road. His report treats more at large

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\* Since satisfactorily arranged between the Canal Commissioners and General Superintendent.

upon this branch of the Company's service—a connection with which I have desired to be released from—and it is again referred to for further information.

I cannot conclude this report without expressing my obligations to my late associate, W. B. FOSTER Jr., with whose co-operation the Eastern Division of the road, notwithstanding the numerous drawbacks encountered, has been placed in use, at a cost below the estimate submitted to the Board. Mr. F. has left the service of the Company for that of the Commonwealth, and is now actively engaged in completing the North Branch Canal.

Of the several principal assistants, and assistant engineers employed on this Division, Mr. S. KNEASS and G. R. MOWRY only, remain upon it. Mr. KNEASS has been chiefly engaged with the unfinished work, and Mr. MOWRY has been placed in general charge of the repairs of the road. The others have found employment elsewhere, or been transferred to the west side of the mountain.

The Western Division, upon which there was no work done of moment previous to my last report, is now in active progress throughout its extent, under the immediate direction of my associate, EDWARD MILLER Esq., who has had charge of the operations upon that division, since my connection with the Company, and has conducted them with his accustomed ability. In the performance of the duties assigned him, he has been ably seconded by his principal assistants, Messrs. LEUFFER, BARNES, CLARK and THOMAS SEABROOK and their junior assistants.

All of which is respectfully submitted by  
Your obedient servant,

J. EDGAR THOMSON,  
*Chief Engineer and General Superintendent.*



ITEMS OF EXPENSES NOT CHARGEABLE TO THE BUSINESS  
PROPER OF THE PENNSYLVANIA RAIL ROAD.

Tolls paid on Freight to Commonwealth,	-	\$ 27,513 82
“ “ Harrisburg and Lancaster Rail Road,	- - - - -	5,727 20
Freight paid Western Division Penn'a Canal,		2,695 45
Commissions on Freight at Philadelphia, Pittsburgh and Johnstown,	- - - - -	5,309 88
Conductors and Brakemen, estimated,	- -	3,300 00
Oil and tallow for Cars,	“ - -	1,056 00
Repairs of Cars,	“ - -	1,800 00
Motive Power east of Harrisburg,	- -	28,750 00
		<hr/>
		\$ 76,152 00

Number of miles run by  
trains on Pennsylvania

Rail Road, - - 196,000 at cost of 16 cts. per mile

Number of miles run by for motive power.

trains on Harrisburg  
and Lancaster Rail

Road, - - - 125,000 at cost of 23 cts. per mile  
for motive power.

Total, 

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321,000 at average of 18 $\frac{3}{4}$  cts.

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# REPORT

OF THE

## SUPERINTENDENT OF TRANSPORTATION.

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General Transportation Office,  
*Harrisburg, January 15, 1851.*

To J. Edgar Thomson, Chief Engineer and  
General Superintendent of the Pennsylvania Rail Road.

IN presenting the Second Annual, but First General Report of the various operations connected with the Department under my charge, it appears to be proper, for the information of those who are interested, that an outline should be given of our business organization.

IN February, 1849, in compliance with your instructions, I visited the rail roads of New York and New England, to examine their Stations, Depots, Shops, Roads, in fact everything connected with their business operations. In the discharge of this duty I was greatly assisted by the facilities afforded by the officers of the roads which it was my privilege to visit, for obtaining a thorough acquaintance with their systems. From the New York and Erie, the Boston and Providence, Providence and Worcester, Fitchburg, Western, and several others, complete sets of forms and freight lists were procured, and having thus attained the object of my mission, I returned and by your directions proceeded to arrange a system which would be adapted to the business of our road.

A careful comparison of the various methods in general

use, satisfied me that no other mode of keeping accounts exceeded that of the Georgia Rail Road in simplicity, and with such modification as would adapt it to our peculiar situation, no better could be devised; it was therefore assumed as the basis of the business organization which has met your approbation, and in accordance with which our operations have been conducted.

The organization referred to, divides the business of the road into four different departments, viz. Conducting Transportation, Maintenance of Way, Motive Power, and Maintenance of Cars—which have been under the immediate charge of the Superintendent of Transportation—as well as the Accounts of the General Office, and the Disbursements required for materials and labor in conducting the operations of the line.

#### CONDUCTING TRANSPORTATION.

This department, as its name implies, embraces the arrangements for the transportation of Passengers, Freight, Mails, &c., with the Accounts of the various Agencies. In its original organization, two officers of equal grade were allowed to each passenger train, a Conductor and Collector; but the practical inconvenience and expense connected with this mode, caused it to be set aside. The plan now pursued consists in selling all the tickets if possible at the local agencies, and leaving few if any to be sold by the conductors in cars.

Freight trains are under the charge of a conductor, who is required to remain with his train from the time of leaving Philadelphia until it returns, and must make a report of each trip to the Superintendent, in accordance with the prescribed rules. As many brakemen are allowed to the train as circumstances require.

On the Pennsylvania Rail Road, one brakeman to six double or twelve single cars is considered a full allowance. On the State Road one to five single cars is required. The most economical way of satisfying the demands of the State, consists in keeping two extra parties of brakemen on the Columbia Rail Road, and an equal number on the Portage Road, whose duties are confined to these roads exclusively. They are each under the charge of a suitable officer, who is authorized to increase or reduce the number in proportion to the requirement of the service. These parties also act as wreckers to remove broken cars and secure the loading from injury.

The State Road being a public highway, and the cars owned entirely by individuals, different arrangements have been found necessary from those which exist on well managed company roads; and numerous regulations and frequent directions from Collectors, Weighmasters, Despatchers, Car and Cargo Inspectors and other officers must be complied with, upon failure of which, from ignorance of the rules, from inability to comply, or other causes, cars are left, loading taken out, and fines imposed. The annoyance from these causes has not, however, been very serious, and in general a courteous and accommodating spirit has been manifested by the officers of the road.

The high rates, the inconvenience and expenses attending the transshipment of freight and its transportation over the State Road, have no doubt been the principal sources of business to the Tide-water Canal.

When all the items which constitute the expenses of transportation are added to the tolls upon the State Road, the charge becomes excessive, and greatly exceeds the charges upon the Pennsylvania Rail Road and other roads owned

and operated by companies. As an evidence of this fact, the following calculation is submitted.

*Expenses of Conducting Transportation on State Improvements.*

The tolls on the Columbia and Portage Rail Roads have heretofore constituted four separate and distinct charges. These are,

Road toll on cargo.	Motive power toll on cargo.
“ “ car.	“ “ “ car.

The last three of these items are independent of the kind of articles carried, and constitute therefore fixed charges which can readily be reduced to a certain amount per 1000 lbs. per mile.

The result of a careful calculation of expenses on each section of the State improvements, is as follows, assuming an average load of 6600 lbs. for each double car; which corresponds very nearly with our last year's average on westward freight.\*

Columbia Rail Road, per mile.						Mills.
Motive power and road wheel tolls per 1000 lbs.,	-					6.0
Cargo tolls, motive power,	-	-	-	-	-	4.0
Cars, oil, and conductors, including repairs,	-	-				4.5
Average commissions,	-	-	-	-	-	3.0
City Rail Road tolls and hauling cars with horse power,						0.5
Loss and damage,	-	-	-	-	-	1.0
Superintendence and incidentals,	-	-	-	-	-	1.0
Total fixed charges, per mile,						<u>20.0</u>

Road cargo toll variable.

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\* An increase of load would reduce the cost of transportation, but it is impossible, particularly with local freight, to preserve an equilibrium. Many of the cars return empty.

## Allegheny Portage Rail Road.

	Mills.
Motive power and road wheel toll, per 1000 lbs., -	9.0
Motive power toll on cargo, - - - - -	10.0
Cars, oil, and conductor, - - - - -	9.0
Commissions, extra agents, &c., - - - - -	6.0
Loss and damage, - - - - -	1.0
Superintendence and incidentals, - - - - -	1.0
Total fixed charges, - - - - -	<u>36.0</u>

Road cargo toll variable.

The same time is required to pass over the Portage Road and return, as on the Columbia Rail Road; the expense of cars, oil and conductors, per mile, is consequently double. From three to four days are usually required, although the length of road is but 36 miles.

## Expenses on Western Division Pennsylvania Canal.

	Mills.
Boat toll, per 1000 lbs. per mile, - - - - -	0.6
Freight at contract rates, - - - - -	7.9
Commissions, - - - - -	3.0
Loss and damage, - - - - -	1.0
Incidentals and superintendence, - - - - -	1.0
Total fixed charges, - - - - -	<u>13.5</u>

Cargo toll variable.

A calculation of the expenses of transportation on each portion of the State works, at the rates published in the last toll sheet, which are almost identical with the present one, will give the following result in cents and mills per 100 lbs., for the whole length of the improvements used by the Pennsylvania Rail Road Company.



Dry goods;	21.7	on Col. R. R.;	16.9	on Portage;	22.3	on Canal.		
Flour; -	16.1	"	"	14.0	"	"	18.2	" "
Bacon; -	17.5	"	"	14.7	"	"	17.1	" "
Iron; -	15.4	"	"	14.0	"	"	19.2	" "
Groceries;	19.6	"	"	15.8	"	"	20.3	" "

## State Taxes.

The tax to the State on all articles passing over twenty miles on the Pennsylvania Rail Road, is 3 mills per ton per mile. The same average tax is paid on the Lancaster and Harrisburg Rail Road; there are therefore 174 miles now in use on which tax is paid amounting to  $2\frac{6}{10}$  cents per 100 lbs., or 52 cents per ton on the whole road. The amounts paid to the State, or chargeable to expenses of conducting transportation on the three sections of the Main Line used by us, including State tax, are—

From Philadelphia to Hollidaysburg,	Dry goods.	Flour.	Bacon.	Iron.	Groceries.
-	24.3	18.7	20.1	18.0	22.2
Johnstown, -	41.2	32.7	34.8	32.0	38.0
Pittsburg, -	63.5	50.9	51.9	51.2	58.3

Comparison of Rates—Reduced to a Standard of 100 miles for convenience of comparison.

	D. Goods.	Flour.	Bacon.	Iron.	Grocer's.
Col. R. R. without State tax,	31.0	23.0	25.0	22.0	28.0
Allegheny Portage R. R., -	47.0	34.5	41.0	39.0	44.0
Baltimore and Ohio, -	19.7	14.3	14.3	11.4	14.3
Penn. R. R., per 100 miles, deducting from regular charges to Hollidaysburg the State Road expenses and taxes, - - - -	26.4	12.4	15.5	13.0	18.9
Penn. R. Road, on Pittsburg freight, making similar de- ductions, - - - -	27.0	00.0	4.7	5.1	15.4

In these calculations the whole charges are assumed to be 110, 85, 60 and 50 cents for the four classes, which were the rates last fall.

The new toll sheet allows a maximum on dry goods which makes a difference of 13 cents in favor of those who use the whole extent of the Main Line from Philadelphia to Pittsburg, but it is of no advantage to the Pennsylvania Rail Road Company.

The expenses connected with the transportation of dry goods over that portion of the State improvements used by the Pennsylvania Rail Road Company, amount to 64 cents per 100 lbs.; at a charge of \$1 per 100 lbs., there will remain 36 cents for the road from Dillerville to Hollidaysburg, 174 miles. The cost of transportation on the Columbia Rail Road, everything included, amounts to 22 cents for 71 miles. The proportion of the Pennsylvania Rail Road, for same distance, is only 14½ cents. The expense on the Columbia Rail Road is therefore 50 per cent. more than on the Pennsylvania Rail Road.

If a comparison be made of road, motive power, and wheel tolls, omitting all other items, and reduced to an equal distance of 71 miles, the result will be—

On Columbia Rail Road,	-	-	14.2 cts.
On Pennsylvania Rail Road,	-	-	10.1 “

A calculation on the cost of flour from Lewistown to Philadelphia, gives the following results—

Expenses on Columbia R. R., 71 miles, per 100 lbs.,	17.8 cts.
Whole charge from Philadelphia to Lewistown,	27.0 “
Proportion of Pennsylvania R. R., 97 miles, -	- 9.20 “
Proportion for a distance of 71 miles, -	- 6.7 “

Consequently the expenses on the Columbia Rail Road, in-

cluding city tolls, hauling, &c., amount to nearly three times as much as for an equal distance on Pennsylvania Rail Road, and the small balance which is left after paying expenses on State Road, is not sufficient to cover the cost of transportation on the remainder of the route.

The new toll sheet for the State works for 1851, makes no material change in the rates of freight, except the allowance of the maximum previously alluded to. Juniata freight must continue to find its way to market by the Tide-water and Chesapeake and Delaware Canals.

If six mills per 1000 lbs. per mile be assumed as the average cargo toll on the Columbia Rail Road, the whole toll paid the State will be 16 mills, which, for 71 miles from Philadelphia to Dillerville, will give 1136 mills per 1000 lbs. over the road. On the canal the boat and cargo tolls will not average more than  $5\frac{1}{2}$  mills per 1000 lbs. per mile, and consequently it would require more than 200 miles of canal to pay the same toll to the State that is received on the Columbia Rail Road. It is clear, therefore, that if all Juniata freight should be carried in cars to Philadelphia over the Pennsylvania Rail Road, the receipts of the Commonwealth, so far from suffering reduction, would be increased.

### *Remarks.*

A comparison of the results that have been obtained, shows that after deducting the proportion of the expenses chargeable to the State Road and Canal, and the State tax on tonnage, there remains for the Pennsylvania Rail Road less than one half the State Road proportion, except on dry goods and groceries, where the State Road expenses exceed ours by about  $30\frac{1}{2}$  per cent. on dry goods, and 66 per cent. on groceries. The average expenses on the Columbia Rail Road

are double those on the Baltimore and Ohio Rail Road, and on the Portage they are three times as great for the same distance. The Pennsylvania Rail Road Company, by carrying flour at 50 cents per 100 lbs. from Pittsburg, has not received one cent for transportation over their road, the whole amount being absorbed for State charges and expenses. At \$1 per barrel, there would be considerable loss.

Complaints are frequently made of the so called extravagant charges on the Pennsylvania Rail Road, and by estimating tolls from the Canal Commissioners' list, without allowing for cars, conductors, commissions, and all other items which swell the transportation expenses, it might appear that we receive a large proportion, when in fact we get almost nothing. I submitted on a former occasion a calculation to show that, estimating our tolls as worth as much per mile as on the State Road, the loss in carrying sheep from Lewistown to Philadelphia, was over \$10 per car load; but this evil has been removed, as far as live stock is concerned, by a late reduction on the State Road.

That other and very considerable reductions should be made is evident, if trade is to be diverted from its present channel. We have no margin on local or Juniata freight upon which a further reduction can be made by us, and the equitable proportion between the Pennsylvania Rail Road and the Columbia Rail Road, on freight passing over both, is entirely reversed. A road forming the terminus of a main line, and receiving accessions from numerous branches, can carry at a much lower rate per mile than any of its tributaries; and this principle has been fully recognised in the adjustment of rail road proportions wherever equity is observed.

We have reason to congratulate ourselves, that from the commencement of operations on the road to the present time,

only one serious accident has occurred. This was a collision resulting from direct violation of instructions on the part of a conductor in whom we had every reason to repose confidence. This collision has been the only one, properly so called, that has occurred upon the road—a fact perhaps without precedent in the early history of any other extensive single track rail road, operating for a great part of the time eight trains daily.

From the opening of the road until its completion to Hollidaysburg, the various operations of the line were conducted with far more regularity than could reasonably have been anticipated; but at this time a break on the Pennsylvania Canal below Middletown, threw the whole business of the canal for six successive weeks over the Lancaster Rail Road, the transshipments being made at Harrisburg instead of Columbia. The order of the Pennsylvania Rail Road Board, requiring the establishment of a through freight line to Pittsburg, demanded immediate attention, and difficulty was experienced in making satisfactory arrangements with collectors on State works for the payment of tolls. The unfinished condition of the road and fixtures above Tyrone, in consequence of a desire to put it in use before the close of navigation, and lastly the arrangements necessary for operating the Columbia Rail Road line, caused such a sudden accumulation of business that several temporary irregularities were unavoidable.

These evils, however, were of short duration, and order and regularity were soon established without the occurrence of any accident.

Perhaps the greatest impediment to the satisfactory operation of a new road, arises from the fact that the numerous offices must necessarily be filled with inexperienced men.

This is absolutely unavoidable; it is not to be supposed

that men occupying satisfactory positions on other roads, will leave them, unless by the influence of some stronger inducement than is offered them at home. In several instances applicants from other roads were appointed, but afterwards declined in consequence of a considerable increase of salary which was made to retain them.

The great length of road brought into operation in the short space of one year, nearly 200 miles, and our peculiar position between the Columbia Rail Road on the one side and the Portage on the other, with the necessity of conforming to arrangements, often incompatible with each other, on both, and without any control of either, adds to the difficulty of management to an extent which cannot easily be realized by any one not familiar with the practical operation of a long single track rail road.

The passenger receipts of the last year were no doubt greatly reduced by the want of a proper connection at Hollidaysburg with the morning line from Philadelphia. For a period of several months, owing probably to the illness of the President and the necessary absence of other members of the Board, the action of the Canal Commissioners could not be obtained, and the Superintendent of the Portage Road was not authorized to keep up the forces at the planes after night. As a consequence of this unexpected condition of things, westward passengers arriving in the evening at Hollidaysburg, were compelled to remain until next morning. Next spring we have reason to believe that this difficulty will not exist, the business of the road will require a relay of hands at the planes, and passenger trains will probably experience no detention.\*

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\* This expectation has been realized—passengers cross the Portage Road without much detention.



Notwithstanding this most unfortunate condition of things, the receipts of the road for the months of October and November, after the opening to Hollidaysburg, far exceeded my expectations, paying not only all the expenses, but eight per cent. in addition, on the whole cost of the road, fixtures, cars, machinery and interest. The profits were derived principally from passengers; the excess of freight receipts beyond expenses, being but very slight. This result was as unexpected to me as it must be gratifying to the friends of the road, and demonstrates beyond the possibility of doubt the great value of the improvement when completed and freed from the clogs and hindrances which now impair its usefulness and reduce its revenues.

The calculations which have been submitted and the results obtained, indicate clearly our true policy in the management of the road, which is to direct attention to the transportation of passengers and valuable freight, confining our eastward tonnage chiefly to the back loading required for the payment of tolls. To attempt a competition in heavy freights, at rates which cannot be made profitable without an abatement of State tolls, seems to be very impolitic.

I would also state in this connection, that regularity and certainty of connections are of more importance than high speed in the transportation of passengers. An average rate of 26 miles per hour when running, or 30 miles as a maximum, is as much as should for sometime be attempted on our road with the fastest trains. If a schedule is calculated at higher rates, lost time from detentions on other roads, cannot be regained without a velocity that is highly detrimental to the road and machinery, and increases the liability to accident from various causes. The safety of passengers, and the reputation of the road for exemption from accidents, deserve



attention in preference to the never to be satisfied demands for higher speed.

### MAINTENANCE OF WAY.

The Maintenance of Way Department is under the immediate charge of a resident Engineer and three assistants called Supervisors, who have attended to the repairs of track, bridges, supplies of fuel and water, and the disbursements connected with this department. The whole line is subdivided into sections of five miles, on each of which is a foreman and two hands for ordinary repairs, with such additional force as circumstances may require. There is also on each division an extra hand who performs the duties of watchman, and passes over the portion of line under his charge, in a hand car, in advance of the passenger train.

The precautions which have been observed have either led to the timely discovery and removal of obstructions that have fallen or been placed upon the track, or they have been thrown off by the fender or cow-catcher with which every engine is supplied. In no instance has an accident occurred from this cause.

### MOTIVE POWER.

The Motive Power Department has been principally under the charge of the Foreman of the Harrisburg shop, under such general regulations as were furnished to him. Considerable difficulty has been experienced from the extent of the road—193 miles—operated from a single shop, and that of insufficient capacity only for a small road; but the accommodations are now better, and will soon be sufficient for the business.

## MAINTENANCE OF CARS.

But few accidents resulting in injury to cars have occurred on the Pennsylvania Rail Road; most of the damage has been done on the other roads over which our cars have passed. The suspension in which we were held in consequence of the unsettled condition of affairs with the Lancaster Company, the failure of negotiations at Lancaster for ground for the erection of buildings, and the delay in widening the track on the State Road, have prevented us from erecting suitable sheds for the protection of our passenger cars. The tunnel on the Lancaster Rail Road is also indirectly the cause of much real and more apparent injury to the cars, as well a source of additional expense in the Motive Power Department. The height is not sufficient to allow pipes of proper size to pass through. Low pipes upon the engines cover the cars with fine dust, which in two or three days cuts off the varnish and greatly injures their appearance; at the same time the draft of the engines is impaired, and their power of generating steam diminished. An alteration to obviate this evil is very necessary.

## ACCOUNTS.

Without entering into any detailed explanation of the system of Accounts, it is sufficient to state that the arrangements are such that any error committed by Conductors or Station Agents, is almost certain of detection at the General Transportation Office, where all daily, weekly and monthly reports are examined, and the results reported to the Treasurer for comparison with the statements of deposits made in local banks to his credit. No cash is received at the general office;

its business consists in regulating all the other offices on the line, and in securing accuracy and uniformity in their accounts. Records are also kept at this office of receipts, disbursements, purchases, consumption of stores, performance of engines, and all other operations connected with the business of the road. From these records, have been prepared the tables which accompany this report.

*Relative Cost of Motive Power, over the Lancaster and Harrisburg and Pennsylvania Rail Roads.*

From a statement prepared in September last, it appears that a considerable difference exists in the cost of Motive Power on these roads, arising from the following circumstances.

- 1st. The heavier grades of the Lancaster Rail Road.
- 2d. The greater unevenness of the surface.
- 3d. The smaller number of miles per trip performed daily.
- 4th. The fuel consumed in standing and in moving cars at Dillerville.
- 5th. The much higher price of fuel on the Lancaster Road.
- 6th. The greater injury to engines from sand and mud thrown upon the machinery by the road not being ballasted.
- 7th. The expenses of pumping water.

After a careful examination of each of these causes of difference, and calculations in detail, it appeared that the motive power expenses per mile, on the Pennsylvania Rail Road, were 16 cents, and on the Lancaster and Harrisburg 23 cents, making a difference of 7 cents over the cost on the Pennsylvania Rail Road. Had the freight been sent by the way of Columbia, the difference would have been less.

In conclusion I would beg leave to express my sense of obligation for the benefit which I have derived from your long experience in the practical and economical management of rail roads, and for the cheerfulness with which you have interchanged opinions in regard to the proper arrangements for the successful operation of the great work with which we are connected. I trust, that in assuming the duties of General Superintendent from which you have withdrawn, I may not lose these advantages, but may continue to enjoy the benefit of your counsel in matters of importance. In accordance with that policy which has been so eminently successful on the Georgia Rail Road, and which from the nature of things cannot fail to produce satisfactory results elsewhere, it will be my constant effort to reduce the expenses in every department to a minimum, and on the other hand to increase the profitable receipts of the road by the encouragement of transportation in such articles as will yield remunerating returns. In the hope that the policy here indicated, will meet the approbation of the Board, this report with accompanying documents is very respectfully submitted.

H. HAUPT,

*Superintendent of Transportation.*

(R) Monthly Statement of the number of West'd Passengers entered at each Station on the Penn. R. R. and H. &amp; L. R. R.

STATIONS.	Sept.	Oct.	Nov.	Dec.	Total.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Whole Total.
2 Dillerville, -		1858	3011	2238	7107	2227	2008	3216	4315	3898	3308	3115	3574	4362	4251	3765	2245	40,516	47,623
3 Kauffman's, -		3	9	3	15	4	1	1	8	5	4	17	6	1	1	8	9	16	31
4 Landisville, -		2	9	9	20	6	7	8	8				19	8	7			107	127
5 Chiques, -		1	1	2	4			4					1					13	17
6 Mount Joy, -		35	127	119	281	103	133	315	433	524	174	133	185	161	101	86	88	2,466	2,747
7 Elizabethtown, -		35	94	78	207	81	93	157	183	135	117	85	125	103	68	62	75	1,284	1,491
8 Conewago, -		14	6	3	20	4	4	9	4	1	7	6	9	6	3	6	6	66	86
9 Middletown, -		145	338	333	816	267	253	612	1061	913	364	355	396	353	440	1167	362	7	7,363
10 Highspire, -		13	45	29	87	25	33	51	118	183	26	31	37	38	27	24	29	62	709
11 Harrisburg, -		1824	1710	1009	5262	758	736	1324	2299	2247	1091	1160	1114	1295	1433	1897	1388	16,632	21,954
12 Rockville, -		38	31	53	28	153	35	42	96	301	70	43	81	57	59	92	83	1,196	1,349
13 Cove, -		28	18	26	25	97	14	6	6	23	12	15	18	109	10	4	19	251	348
14 Duncannon, -		76	60	51	53	240	51	81	83	98	78	49	130	68	55	73	102	925	1,165
15 Acqueduct, -		37	41	43	20	141	32	37	131	214	101	71	107	87	105	113	39	1,173	1,314
16 Baily's, -		25	22	34	6	87	6	13	40	20	21	17	22	15	16	37	19	248	335
17 Newport, -		111	72	79	100	362	83	79	112	114	91	67	122	89	115	105	125	1,208	1,570
18 Millerstown, -		124	113	58	52	317	50	59	74	55	85	75	93	71	77	78	111	915	1,262
19 Tuscarora, -		24	21	4	5	54	9	10	20	32	38	19	33	10	18	16	13	241	295
20 Mexico, -		28	12	18	16	74	15	22	20	53	23	46	25	19	17	34	26	322	396
21 Perrysville, -		61	73	35	47	216	57	33	54	113	50	69	101	80	16	102	95	857	1,073
22 Milfin, -		157	121	110	510	110	81	108	120	154	135	144	212	186	245	239	357	2,091	2,601
23 Lewistown, -				57	57	237	239	416	456	587	422	31	476	302	423	473	394	4,766	4,823
24 Anderson's, -				1		3	12	3	13	19	14	29	34	23	12	24	11	197	198
25 M'Veyton, -								38	112	204	179	124	214	109	89	85	141	1,295	1,295
26 Newton Hamilton, -								46	71	100	164	94	69	64	49	58	114	829	829
27 Mount Union, -											175	115	243	156	181	204	228	1,302	1,302
28 Mapleton, -											62	63	49	13	17	16	8	228	228
29 Mill Creek, -											115	113	88	67	77	73	133	666	666
30 Huntingdon, -														293	521	741	505	2,060	2,060
31 Petersburg, -														26	83	100	153	362	362
32 Spruce Creek, -														72	194	219	407	892	892
33 Tyrone, -														99	180	179	303	761	761
34 Fostoria, -														32	78	91	163	361	361
35 Altoona, -														58	414	166	175	513	513
Amounts,	2533	4103	5160	4062	16,158	4177	3922	6959	10,003	10,028	6766	6649	7591	8333	9133	10348	7926	91,897	108,955



(S) *Monthly Statement of the number of East'd Passengers entered at each Station on the Penn. R. R. and H. & L. R. R.*

STATIONS.	Sept.	Oct.	Nov.	Dec.	Total 1849.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total 1850.	Total for 16 Mo's.
36 Hollidaysburg, -														540	1919	1895	1695	6049	6,049
35 Altoona, -														66	132	135	191	524	524
34 Fostoria, -														36	83	101	119	339	339
33 Tyrone, -														105	133	211	289	738	738
32 Spruce Creek, -														139	199	337	368	1043	1,043
31 Petersburg, -														101	145	321	274	841	841
30 Huntingdon, -											1356	1636	1751	1351	422	507	446	7469	7,469
29 Mill Creek, -											93	67	105	50	42	43	35	435	435
28 Mapleton, -											33	51	32	18	22	20	11	190	190
27 Mount Union, -											375	84	77	73	59	64	126	4598	4,598
26 Newton Hamilton, -											111	61	169	86	78	79	95	1015	1,015
25 McVeyton, -											178	170	311	168	192	213	292	3597	3,741
24 Anderson's, -											24	16	43	19	14	15	19	377	384
23 Lewistown, -											485	412	568	559	728	372	715	6544	11,381
22 Midlin, -											147	124	168	125	186	141	286	1719	2,131
21 Perryville, -											62	34	71	66	56	32	37	594	817
20 Mexico, -											38	16	72	26	29	30	22	386	484
19 Tuscarora, -											14	20	28	23	19	6	25	237	319
18 Millerstown, -											113	91	98	84	75	75	172	1097	1,472
17 Newport, -											115	106	153	151	147	123	189	1469	1,898
16 Bally's, -											13	20	56	22	18	18	11	218	284
15 Aqueduct, -											544	314	406	531	573	354	212	4380	4,490
14 Duncannon, -											247	387	232	242	230	192	359	3069	3,942
13 Cove, -											21	24	35	19	7	10	13	299	377
12 Rockville, -											196	119	136	50	93	94	108	1258	1,635
11 Harrisburg, -											1557	1471	948	1790	1406	1281	1549	18505	21,985
10 Highspire, -											27	28	43	17	13	13	13	263	298
9 Middletown, -											147	176	179	135	169	145	115	2054	2,370
8 Conewago, -											7	12	4	2	15	3	7	77	85
7 Elizabethtown, -											131	151	232	136	133	104	110	1680	1,944
6 Mount Joy, -											198	241	337	152	196	204	209	2548	2,947
5 Chiques, -											59	31	24	26	32	36	42	352	404
4 Landisville, -											1	10	9	4				35	49
3 Kauffman's, -											3	1						35	49
Amounts,	2060	3119	3799	3661	12,639	4149	3530	5373	6675	6373	5965	5859	6264	6990	7574	7174	8154	74,139	86,778

(LL) *Statement of Expenses in detail of Pennsylvania R. R., from September 1st, 1849, to January 1st, 1851.*

MAINTENANCE OF WAY.		Dolls.	C.	Dolls.	C.
To Items of account as follows:					
" Foreign and laborers, -	-	28,639 50			
" Superintendence, -	-	1,000 00			
" Repairs of bridges, -	-	134 39			
" Tool account, -	-	751 62			
" Supervisors, -	-	565 00			
" Cross ties and sills, -	-	34 00			
" Road and hand car, -	-	12 00			
" Incidental, -	-	456 98			
				31,623 49	
MOTIVE POWER.					
To Shop repairs, -		43 94			
" Wood consumed, -	-	25,552 86			
" Cotton waste, -	-	419 01			
" Oil and tallow, -	-	4,574 79			
" Expenses of water stations, -	-	1,370 86			
" Superintendence, -	-	500 00			
" Engineers, -	-	8,795 42			
" Tools, -	-	5 00			
" Firemen, -	-	4,379 26			
" Laborers, -	-	1,673 64			
" Coal, -	-	517 45			
" Shop rent, -	-	479 08			
" Repairs of engines and tender, -	-	11,409 16			
" Incidental, -	-	397 45			
				60,147 92	
MAINTENANCE OF CARS.					
To Repairs of passenger cars, -					
" Repairs of freight cars, -	-				
		3,109 35			
		1,938 58			
					5,047 93
CONDUCTING TRANSPORTATION.					
To Wages of laborers, brakemen, &c., -					
" Loss and damage, -	-	7,456 83			
" Stationery and printing, -	-	291 78			
" Clerks, -	-	1,560 33			
" Superintendence, -	-	2,139 49			
" Oil and tallow, -	-	1,330 00			
" Station agents, -	-	1,892 75			
" State tolls, -	-	9,547 49			
" Harrisburg and Lancaster Rail Road tolls, -	-	27,513 82			
" Advertising, -	-	5,727 20			
" Depot rent, -	-	345 00			
" State tax, -	-	678 11			
" Canal freight, -	-	2,114 74			
" Conductors, -	-	2,695 45			
" Incidental, -	-	8,347 97			
		3,783 98			
					75,424 94



Names of Engines.	Names of Builders.	When placed on Road.	No. of drivers.	Size of drivers.	Miles run with passengers.	Miles run with freight.	Total miles.	Cost of repairs.	Cost per 100 miles run. of			Total expense including fuel, per 100 run.	Weight on drivers
									Re-pairs.	Tallow, oil & waste.	Fuel.		
				Ft. In.				\$ Cts.	\$ Cts.	\$ Cts.	\$ Cts.	\$ Cts.	
Allegheny,	M. W. Baldwin,	July 9, 1850.	4	4 6	13,579	2,125	15,704	187 80½	119½	72½	5 42	7 70½	45,975 25,825
Armstrong,	"	Dec. 22, 1850.	4	5 0	1,127	72	1,199			72	5 84	8 44	38,675 29,875
Beaver,	"	Sept. 10, 1850.	8	3 6	144	4,652	4,796	71 36½	148½	1 24½	11 80	17 68½	43,350 43,350
Blair,	"	Sept. 23, 1849.	2	6 0	30,911		30,911	479 94½	155½	92	5 43	9 75½	48,150 21,000
Cambria,	Norris & Brother,	Jan. 22, 1850.	4	4 6	20,351	3,132	23,483	263 12½	112	1 04	5 19	8 98	40,825 35,320
Columbia,	M. W. Baldwin,	Sept. 18, 1850.	4	4 6	990	6,713	7,703	180 84½	234½	1 06	7 68	12 76½	44,800 25,400
Clinton,	"	Sept. 5, 1850.	4	4 6	1,430	6,402	7,832	150 13	191½	84½	7 33	11 85½	44,800 25,400
Clarion,	"	July 22, 1850.	4	4 6	8,198	1,080	9,278	158 37½	170½	1 42½	7 11	12 26½	45,975 25,825
Centre,	"	Dec. 9, 1850.	4	4 6	641	812	1,453	28 54	196½	84	6 62	11 21½	44,800 25,400
Clay,	Norris & Brother,	Oct. 16, 1849.	2	4 0	128	13,162	13,290	275 61	207½	90½	4 88	9 47	23,350 14,600
Dauphin,	M. W. Baldwin,	Nov. 5, 1849.	8	3 7		3,298	3,298	124 58	377½	1 07	17 69	22 53½	50,975 50,975
Eric,	"	Oct. 7, 1850.	4	4 6	1,993	4,450	6,443	75 87½	117½	1 15	9 43	13 30½	44,800 25,400
Elk,	"	Oct. 16, 1850.	4	4 6	1,988	4,593	6,581	54 49½	82½	71½	6 86	9 75	44,800 25,400
Franklin,	"	Oct. 16, 1849.	4	4 6	18,489	3,482	21,971	1047 55	477	91½	5 04	12 51½	30,650 16,750
Huntingdon,	"	Nov. 16, 1849.	4	4 6	20,268	3,440	23,708	659 59½	278	94	5 97	11 82½	45,275 25,825
Harrisburg,	"	Oct. 16, 1849.	2	4 6	432	7,193	7,625	94 43	123½	98	6 79	10 55½	23,900 12,000
Indiana,	"	Jan. 22, 1850.	2	4 6	29,468	36	29,504	467 22	158½	89½	5 13	9 04	48,750 21,000
Junata,	"	Nov. 2, 1849.	2	4 6	31,999	6,774	38,773	362 41	193½	86	5 74	8 88½	45,275 25,825
Mifflin,	"	Sept. 1, 1849.	2	6 0	29,814	91	29,905	592 65	198	83½	4 59	9 41½	47,800 21,000
Penrose,	"	Oct. 16, 1849.	2	4 6	512	7,809	8,321	302 36	363½	95	3 88	10 21½	24,225 12,000
Perry,	"	Jan. 10, 1850.	8	3 7	36	1,642	1,678	56 86	338½	1 90	13 49	18 77½	50,975 50,975
Porter,	Norris & Brother,	Oct. 16, 1849.	2	4 0	192	1,036	1,228	407 69	33 20	2 84	4 95	61 45	23,250 14,600
Venango,	M. W. Baldwin,	Oct. 29, 1850.	4	4 6	1,426	3,494	4,920	17 70	36	84½	7 93	10 63½	44,800 25,400
Wyoming,	"	Nov. 25, 1850.	4	5 0	4,968	36	5,004	29 01½	58	84½	6 87	8 88	38,675 22,875
Washington,	"	Oct. 16, 1849.	6	3 6	740	14,284	15,024	717 03	477	90	9 43	17 85	34,675 34,675
Westmoreland	"	Sept. 7, 1850.	8	3 7		1,367	1,367	56 58½	413½	256½	15 56	23 65½	50,975 50,975
Total, - -					219,824	101,175	320,999						



